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THE DEVELOPMENT OF INTELLIGENT BEHAVIOR IV--ROBERT W. WHITE.

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THE AUTHORS REVIEW THE THEORY OF MOTIVATION PRESENTED BY ROBERT W. WHITE IN HIS BOOK "LIVES IN PROGRESS" (1952) AND IN AN ARTICLE "MOTIVATION RECONSIDERED--THE CONCEPT OF COMPETENCE" (1959). WHITE PROPOSES THE CONCEPT OF "COMPETENCE" TO ACCOUNT FOR THOSE THINGS IN HUMAN BEHAVIOR LEFT UNEXPLAINED BY OTHER THEORIES OF MOTIVATION. COMPETENCE IS USED TO REFER TO AN ORGANISM'S CAPACITY TO INTERACT EFFECTIVELY WITH ITS ENVIRONMENT. WHITE CONTENDS THAT COMPETENCE IS THE RESULT OF GRADUAL LEARNING BY ORGANISM-ENVIRONMENT INTERACTION. COMPETENCE MOTIVATION, CALLED "EFFECTANCE" BY WHITE, IS DESCRIBED AS DIRECTED, SELECTIVE, AND PERSISTENT BECAUSE IT SATISFIES AN INTRINSIC NEED TO COPE WITH THE ENVIRONMENT. THE RELATIONSHIP OF THE MOTIVATION THEORIES OF HULL, SPENCE, PAVLOV, AND BERLYNE ARE ALSO REVIEWED BRIEFLY IN RELATION TO WHITE'S THEORY. THE AUTHORS CONCLUDE THAT WHITE'S THEORY OF COMPETENCE AND COMPETENCE MOTIVATION IS NECESSARY TO PROVIDE AN UNDERSTANDING OF THE DEVELOPMENT OF INTELLIGENT BEHAVIOR. THEY CONSIDER IT TO BE ESPECIALLY VALUABLE AS AN EXPLANATION OF THE EFFORTS OF CHILDREN AND YOUNG ADOLESCENTS IN LEARNING TO COPE AND COME TO APPROPRIATE TERMS WITH THEIR ENVIRONMENT. IN THIS CONTEXT, THE AUTHORS REGARD INTELLIGENCE TO BE THE ABILITY TO ADAPT TO AN INCREASINGLY COMPLEX AND SOPHISTICATED ENVIRONMENT. TWO CASE STUDIES ARE PRESENTED TO SUPPORT THE AUTHORS' CONTENTIONS OF THE APPLICABILITY OF WHITE'S THEORY TO THE EDUCATIONAL PROCESS. (AL)

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The development of intelligent behavior IV: Robert W. White

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Explanations of motivation in some form or another of drive theory (e.g. tension reduction) appear quite often to have been adopted by many American teachers. In pedestrian terms this concept holds that the stronger the drive usually imposed by the teacher, the more the student will learn. The psychologist immediately recognizes the formula of Clark L. Hull:

$$_{s}E_{r} = {}_{s}H_{r} \times D \times K \times V.$$

The formula interpreted verbally means that the student's excitatory potential ($_{s}E_{r}$) which is taken as evidence of learning, equals a multiplicative relationship of habit ($_{s}H_{r}$), drive (D), incentive (K) and stimulus intensity (V). The key word is multiplicative. Kenneth W. Spence (Hull, 1952; Hilgard, 1966, p. 189) who took his Ph.D. at Yale in 1933 greatly influenced Hull to re-evaluate the binary relation of incentive changing the relation from a multiplicative to an additive factor. Many psychologists such as R. W. White (1959) seriously question the role of drive as a factor in much of human motivation. White proposes that drive may urge the human organism to satisfy the primary needs such as hunger and thirst, and may rew sult in narrow and highly specialized learning. Drive, as currently conceived however, in the behaviorist approach to learning is held to contribute little if anything to general learning which is most appropriately the objective of classroom instruction.

Other approaches to motivation may be identified as hedonism and activation exemplified in the works of David C. McClelland (1951), Paul T. Young (1949), and D. O. Hebb (1949). Hedonism is primarily based on the pleasure-seeking, pain-avoidance principles, which often have referential roots in Freud. Young's theory has as a core concept the belief that positive and negative affective states are necessary to account for arousal, maintenance and direction of behavior. McClelland and his associates have measured motivation by projective techniques from a Freudian frame of reference. Donald O. Hebb is an activation theorist who holds that the problem of motivation is the patterning and direction of behavior. He proposes that simultaneously excited neural cells in the brain constitute assemblies of mutually facilitating elements, and that a series of assemblies make up a phase sequence, which pattern and direct behavior.

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The homeostatic approach involves the concept of balance, and is widely held (Lewin, 1951; Freeman, 1948; Stagner & Karwoski, 1952). The term, homeostasis was introduced by Walter B. Cannon (1932, 1939), extended to behavior by C. P. Richter (1942), and introduced to psychology by J. M. Fletcher (1938, 1942) who felt that most psychological concepts could be subsumed logically and factually within homeostasis. Charles N. Cofer and Mortimer H. Appley (1966, pp. 364-6) explain that the theory of homeostasis does not insist that a disturbed organism return to its prior state of equilibrium, but that stability can be reached by assuming the organism to be an open system, enjoying a continuous exhange of energy with the environment. Jean Piaget (1941 translated by Daniel E. Berlyne and Malcom Piercy, 1950; Berlyne, 1959; Brown, 1965) adopts a homeostatic model of adaptive behavior with processes of accomodation and assimilation which return the organism to a state of stability. Piaget defines motivation as disequilibration. J. McVicker Hunt (1960, 1961) also adopts a homeostatic model with his concept of cognitive imbalance.

The purpose of this positional discussion is to propose that none of the major motivational models are adequate for explaining the interaction between children and adolescents with their teachers. In general, the model of honeostasis appears more closely related to the actual educational encounter, but some additional explanation is needed for adequate understanding. The writer feels that the laws of drive theory as postulated by Hull (1943, 1952), and as defended by his eloquent ad hoc logic are scientifically and theoretically sound. Nonetheless, drive theory is not always related to the behaviors witnessed in the classroom, nor does the hedonism model suffice to explain many classroom actions. The homeostatic model approaches more closely, especially in conjunction with a most useful and meaningful theory, as proposed by Robert W. White, first mentioned in his Lives in progress (1952) and more clearly defined in his article, "Motivation reconsidered: The concept of competence" (1959).

Competence

White's major theoretical concept (his word is "conceptualization"), rises from his conviction that drive theory as found in Hull and Freud cannot fully explain operating forces in human behavior. White states his purpose is an attempt to conceptualize competence, which he proposes to adequately account for those things in human behavior left unexplained by other theories of motivation.

Competence is defined as referring to an organism's capacity to interact effectively with its environment. Later in his statement, White amplifies the definition saying that competence is the product of what Hebb (1949) calls the cumulative learning of a flexible relationship between stimulus fields and the effects that can be produced in them by various kinds of action. Flexibility is destroyed by strong drive, from which organisms learn well. The organism, however, does not tend to become familiar with its surroundings under the impetus of strong drive. White refers to Piaget's (1952) studies of the development of the concept of substance and permanence of objects, which leads to the ideas of space and causality, for support of his (White's) contention that competence is the result of gradual learning by organism-environment interaction.

White states that the attainment of competence cannot adequately be motivated by the energy sources conceptualized in drive theory, which cannot account for man's ability to cope competently with his environment. This ability of man is not innate, nor instinctual, nor can it be arrived at by maturation. He states also that in considering the problem of motivation of human behavior, boredom, unpleasantness of monotony, the attraction of novelty, the tendency to vary behavior and the seeking of stimulation and mild excitement must be accounted for.

It should be kept in mind that White does not repudiate drive theory as postulated by Hull, nor as intimated by Freud. He points instead to what he considers important inadequacies in drive theory's ability to explain some observable behavioral phenomena in higher organisms especially human beings. He also indicates there are equivalent inadequacies in other motivational models.

Cofer and Appley who do repudiate the drive theory model (1966, p. 837) saying "the drive concept is without utility. . .it is a liability," discuss White's competence model (p. 615) explaining that effectance motivation is "the production of environmental change."

White says that the main direction of behavior is not to reduce stimulation, as held by drive theorists and some hedonists (escape from painful or noxious stimulation), but rather it is to vary the manner in which a stimulus acts on the sense organs. Such an approach might be used to explain in psychological terms the beauty of music or other aesthetic experiences.

Effectance

White argues for a competence motivation as well as competence in the sense of an achieved capacity. He says

competence motivation is not random. Rather, it is directed, selective, and persistent because it satisfies an intrinsic need to cope with the environment. This competence motivation is called effectance by White, who in his earlier work (1952, pp. 247-8) refers to observations of children revealing playful, manipulative and exploratory activity done "for the fun of it" which serves a serious biological purpose. White calls the part which is fun as a "feeling of efficacy--or sense of mastery--and the biological purpose is clearly the attaining of competence in dealing with the environment."

Effectance motivation is seen as not having consummatory acts, and external stimuli are important but secondary. Satisfaction appears to lie in the arousal and maintaining of activity, which need not be intense, but may simply be what would be called play. Such playful activity would be overridden by strong primary drives, but White holds it to occupy the spare waking time between episodes of homeostatic crisis or urgent drive. Much of the time spent by children and adolescents in the educational encounter would appear to be under the influence of effectance motivation, and an understanding of this motivational concept would take on additional importance for the educator if such is the case.

In effectance motivation, dealing with the environment means carrying on a continuing transaction which gradually changes the relationship to the environment. Such can be seen in the play of youngsters. White deplores a molecular analysis of play, saying that such an analysis loses the most essential aspects of this behavior--the essential continuity of action and change between the organism and the environment. Play activity in this context is satisfied by the feeling of efficacy, even without seeking to satisfy a primary goal, is demonstrated by the adult's indulging in sex for pleasure, rather than connecting it to the biological goal of reproduction. Just as sex may continue to be engaged in after most of the mysteries and adventures have been explored, so effectance motivation may lead to continuing exploratory behavior when actual gain in competence may be minimal.

In children effectance motivation is seen as undifferentiated, with differentiation coming later in life and involving achievement, mastery, construction, and other need satisfactions. This does not mean that play is anything but serious business in childhood, for it is in play that children discriminate visual and aural patterns and build object concepts, while practicing and learning verbal behavior and verbal control of behavior (Luria, 1959). White holds that play in infants is a time of active learning when effective transactions with the

environment and movements towards autonomy are established. He states that the toddling infant has begun to achieve competence as he takes his first masterful steps and begins to effect changes in his surroundings.

In addition to the logical and empirical foundations for the concept of effectance motivation, White draws support from biology. He holds that a concept such as competence is necessary for any biologically sound view of human nature, especially considering a longitudinal view of the nature of living systems. He relates this to man's survival, since the curious and exploring organism manipulated his environment, improved on it and was able to survive. In man there is an increasing tendency towards autonomy from external stimuli, as he relies more and more on internal motivation. This appears to be true so long as there is any development in man, and when development ceases man is dead. Man's autonomy correlates with his developing competence in his actions and with his surroundings.

Taken in the context of White's statements and reasoning, all civilization is a monument to competence and effectance motivation. The competent man has dealt effectively with his environment to make it more hospitable, and in so doing has developed such conveniences as air conditioning, rapid transportation and communication, efficient housing, hospitals and medicine, and the schools to educate his offspring by teaching him to be competent.

Ivan Pavlov

In establishing a biological basis for the concept of competence and effectance motivation, while simultaneously asserting further the inadequacy of drive theory in motivation, White reaches back to a 1908 study by Yerkes and Dodson; quotes Tolman's (1948) suggestion that high drive narrows the range of cues; finds support from Johnson's (1953) studies of latent learning; and ultimately shows that Bruner, Matter and Papanek (1955) found high drive to interfere with learning.

White appears to have avoided purposely or inadvertantly a very valuable source of support in the work of Ivan P. Pavlov. Pavlov (Hilgard, 1966; pp. 57-6) considered irradiation and concentration of afferent neural stimuli to the cortex as essential to learning. The cortical involvement in learning functions by concentration of irradiated impulses. Concentration occurs according to Pavlov, under a situation of moderate stimulation. Irradiation which does not result in effective learning occurs during periods of low or strong stimulation.

It should be brought out that Pavlov's interpretations of the physiology of the brain subsequently have been shown to be somewhat inadequate, but the point is that most drive theories, to which White objects as

inadequate, are generally founded on Pavlov's work as interpreted (or misinterpreted) by American behaviorists. This primary source of drive theory brought into the structure of conditioned reflex psychology the belief that high or very low stimulation interfers with learning. It seems that White would have given an important additional dimension to his conceptualizations had he utilized Pavlov's thinking, considering Pavlov's enormous influence on many of the developments in American psychology.

White acknowledges that some general effectance learning does occur under intense stimulation, but that under moderate stimulation the human organism can attend to less urgent matters, explore the environment by manipulation and testing of himself and the world about him. In periods of moderate stimulation man achieves a broad and skillful ability to cope with his surroundings. The infant learns what effect he has on objects and significant people by interaction, and in periods of non-urgency such as a period of play with parents, effectance learning takes place. It seems that there is little doubt that Pavlov would have supported these concepts, just as his theories do when applied with logic.

Daniel E. Berlyne

A drive theorist, to whom White does not refer is Berlyne (1954, 1957) who reported work prior to White's theoretical statement on effectance motivation. Much of Berlyne's work concerns epistemic curiosity and exploratory behavior, and in many ways appears to cover behavior domains similar to those which concern White. Berlyne's (1965) Structure and direction of thinking represents a synthesis of his earlier work. In his discussion of the motivation of exploratory behavior (competence and effectance), Berlyne distinguishes two types of exploration. Specific exploration, which appears to be tripped off by an aversive condition which Berlyne calls perceptual curiosity, i.e., incomplete perception may leave the person with uncertainty, which is reduced by exploratory responses designed to obtain additional information. The second type of exploration, diversive exploration, which is aroused by interesting or entertaining stimuli. Berlyne holds specific exploration to be reinforced only by information capable of reducing uncertainty.

Collative Variables

Collative Variables The principal determinants of specific exploration are labeled by Berlyne as collative variables (1965, pp. 245-247) with empirical referents such as "novelty," "change," "incongruity," and "complexity." To collative variables, Berlyne attributes two specific properties. First, they possess close links with the concepts of information theory, and collative variables entail conflict (instigation of incompatible responses). The nature of

conflict relates to the stimuli acting on the organism and the behaviors evoked. Conflict is not something a person is in or not in according to Berlyne, but for the alive, awake individual there is a constant degree of conflict, which is closely related to uncertainty. The primary difference between conflict and uncertainty is that uncertainty reflects probability of alternate responses, while conflict depends on their absolute strengths.

Exploratory behavior appears to reduce drive resulting from exceptionally novel, surprising, complex or puzzling stimulus patterns. The act of exploration provides reinforcement, which facilitates the retention of the information obtained which consequently reduces the drive. Such reinforcement would tend to strengthen the individual's inclination to engage in exploratory activity in comparable situations.

Conflict and Arousal Conflict on the symbolic level may relate to discrepancies or inconsistent relations among symbolic processes. Resultant tension can only be reduced by modifying symbolic structures and injecting new information. A state of high drive induced by conflict related to the symbolic processes constitutes epistemic curiosity. This condition can be relieved by the acquisition of knowledge.

Arousal may also result from a state of inordinately low stimulation, which we call boredom. Such a state may be relieved by receipt of stimulation from virtually any source, provided that it brings the collative properties of the environment to an optimal level. A person bored by inactivity may become restless and take a walk, or watch a television program which really does not interest him. The bored individual in a class may attempt escape through autistic thinking, fantasy, doodling, or any other of a number of activities. Berlyne holds that relieving conceptual conflict appears to be a result of directed thinking which has both information-rejecting and information-gathering aspects. The reduction of the tension caused by conceptual conflict appears to come about by the information provided by directed thinking.

Evidence tends to confirm conceptual conflict as a generator of epistemic curiosity. Relief of conceptual conflict can provide reinforcement for the learning processes by which knowledge is acquired. Berlyne's experimental work took the postulated determinants of conceptual conflict and tested their effects on epistemic curiosity, measured through verbal reports. He relates the Soviet studies of Morozova (1955) and her associates which were devoted to "interest" in school children. One intriguing criterion studied was the literature which interested children. The books most in demand raised questions, offered chances to guess answers and required thought on the part of the child. Most rejected books were simple purveyors of information.

Discovery Methods Berlyne comments in his section on discovery methods in education that most new techniques rely heavily on stimulating independent discovery of facts and

development of individual judgment. The student is not viewed as passive or absorbing; his curiosity has to be cultivated so that he will discover knowledge through his own activities. He says that discovery methods may cause children to assimilate material that previously might have been considered beyond them, and that discovery techniques are primarily manipulation of conceptual conflict.

Berlyne alludes to the work of Suchman (1961), for whom discovery learning is equivalent to 'inquiry methods,' who began the classroom experience with a film in which some surprising physical phenomenon was demonstrated. Then the children were encouraged to ask questions, and were directed to discover the most appropriate answer. Zankov (1957) reported of children being allowed to examine an object during a lecture, instead of the usual listening to the lecture alone. Zankov's results appear to support use of such techniques of discovery learning. Milerian (1960) studied transfer of skill from operating a lathe to operating milling and drilling machines. When the experience of the subjects proved to be inadequate for the new situation, they compared differences between the new task and the old operation, usually generalizing some practical course of action. Kersch (1958, 1962) studied the advantages of discovery methods over traditional methods in the teaching of math and supported the hypothesis that students using discovery methods are more motivated to learn.

Epistemic curiosity is usually stirred up by an experience which contradicts expectations or leaves the student perplexed. Berlyne states that the newer methods are aimed at fostering understanding, and that there are significant signs of success. It seems apparent that understanding will tend to eliminate conceptual conflict, by reinforcement (drive reduction) and thereby what has been learned will tend to be more readily retained by the student.

Positional Statement

The contention of this paper is that White's theory of competence and effectance motivation or some similar concept is necessary in understanding the development of intelligent behavior as well as being extremely valuable and applicable to the educational encounter. This seems to hold especially in the educating of children and young adolescents, whose primary task during this period of development is to cope and come to appropriate terms with their environment. In this context, intelligence is understood to be the ability to adapt to an increasingly complex and sophisticated environment. The development of intelligent behavior is held to be highly correlated with the concept of competence and it proprioceptive effectance motivation.

A second contention, believed to be equally important is that White's theory is supported by the motivational concepts most frequently associated with drive theorists such as Pavlov, Hull, Spence and Berlyne.

Case Studies

To bear out the stated contentions of this paper, and to demonstrate the gradual achievement of competence by effective coping with the environment of the classroom, two case studies are to be related. The first case study, called Kevin, is a longitudinal, nine-month study of one child as recorded by his teacher. The study of Jody is in many ways similar to the study of Kevin. Although the two boys shared a classroom for one academic year, their individual environments are so radically different as to be considered noteworthy. The studies are considerably abbreviated, but the essential points have been maintained and each is believed to demonstrate lucidly that effective coping environment is essential to the development of intelligent behavior.

Kevin

Kevin was eleven-years-and-two-months old on the first day of school. He is blond, blue-eyed, somewhat tall for his age and muscular. It came as no surprise to discover that Kevin had participated in organized athletics for several years, playing Pony League Baseball, Little League Baseball and Football. In baseball he is the pitcher, while he operates as the quarterback in football. In response to the assignment to write a "Who I am" paragraph, Kevin responded:

> I am Kevin _____. I like sports and am pretty good at them. I don't girls very much. I am sort of dumb but I am a good athlete. I want to play football for The University of Texas.

The cumulative record revealed Kevin's family to be socially and politically prominent in the community. According to McGuire and White's "Measurement of Social Status" (in McGuire & Rowland, in press) Kevin's family would be categorized as lower-upper class. There were three children, two boys and a girl. Kevin was the middle child, often charged with responsibility for his younger sister, since the older brother had advanced into a nearby Junior High School. There was a striking family resemblance between Kevin and his younger sister.

From the first day of school Kevin was a quiet boy, quick to obey, but reticent to participate in in classroom activities. He gave no sign of presenting any problems to the classroom, and still the teacher observed him, suspecting problems which Kevin was unable to express. The teacher's reservations were based on the scores recorded in Kevin's cumulative folder which indicated a high normal per-

formance on achievement tests, but Kevin's grades had not relected this in his academic career (previous years grades were recorded). Kevin consistently refused any help with physical tasks, and quickly assumed a leadership role in the physical education experiences of the class. He resented the participation of girls on his team, however the teams were selected by randomly dividing the classroom of sixteen boys and eleven girls.

Kevin's father did not attend the "Back-to-school" night traditionally held in the elementary schools of the system, even though the teacher had urged father attendance. It was not until the parent-teacher conference, at which time the teacher insisted on both parents coming, that the teacher met Kevin's father, an invalid permanently confined to a wheelchair.

About six weeks after school had begun, while participating in a baseball game, the girls began to taunt and tease Kevin who was pitching. It was the first outburst of emotion which the teacher had ever witnessed on Kevin's part. He cried openly. Kevin refused to pitch again, using the excuse that his Little League coach cautioned him not to pitch softball. It was not until the class began to play tag football, and the girls were excluded, that Kevin again assumed his role as a leader in sports.

Because of the proximity of The University of Texas, and the high interest of the class during football season, the teacher initiated a program of analysizing a locally produced television show featuring the university's head coach. Being familiar with the athletic program of the university, the teacher knew that the coach would stress academic achievement several times during the season, which he did. The teacher used these references to the insistence of the University on satisfactory academic performance as the focus of several seminar-type discussions by the class. Careful investigations were made by the students into academic requirements for athletes, not only at The University of Texas, but at other schools of the Southwest Conference. Soon after, Kevin came in privately to the teacher and asked for help with math and English. The teacher agreed to voluntary tutoring sessions. At all times the students lead the tutoring sessions, and other boys (no girls participated) came on a voluntary basis twice a week for one hour after school. Kevin's leadership ability in athletics transferred quickly to these academic sessions.

The class was involved in a project to teach science using discovery methods based on epistemic curiosity. Many of the sessions were game-like, and Kevin participated eagerly until at the mid-term, the student teacher was given responsibility for the science teacher. The student teacher was an attractive young woman studying at The University of Texas. Kevin openly expressed his dislike of her, saying that this had been a "happy year" only because his teacher was a man.

In a social studies unit on types of government, the class was organized for a full week as an authoritarian dictatorship. The students wore uniforms: the girls wore white blouses and dark skirts, while the boys wore shirts, ties and slacks. At the end of three days the class was allowed to vote on continuing the dictatorship. The teacher rigged the election to force continuance, but Kevin openly campaigned for the dictatorship and was able to sway the sixteen boys to his thinking so that the rigging was unnecessary. The final two days were made extremely rigid, with absolutely no unrecognized talking, marching to the cafeteria, and penalties established for minor infractions of the rules. On the final day the class assignment was to justify in writing why they would revolt against such a government. Kevin wrote (with editorial corrections):

1. I would think that people would revolt against such cruelity and harshness.
2. I would think that the people would revolt because they were starving to death.
3. They would probably revolt because your child would be walking home and some soldiers would walk up, grab, and whip him then put him in a concentration camp and the child's family would never see him again.
4. The teachers of schools could show favoritism for a few students and whip all the other students.
5. The teachers might tell your child to wear a green hat and your family might not be able to pay for one, and the teacher might whip your child every day that he didn't have a green hat on.
6. The military junta might, if you were rich, take all your money and land and then they might distribute your land and money, and sometimes would even take the money and land of the poor.

Kevin first began to work with the student teacher in a science project and later in a math group. His relationships with girls became more relaxed but remained reserved. At the end of the year the Iowa Test of Basic Skills was administered and Kevin's achievement scores demonstrated substantial gains.

Follow-up inquiries have revealed that Kevin has continued to gradually become competent academically as well as athletically and socially.

Comment

It seems clear that Kevin demonstrates White's contention that without strong drive the developing human gradually acquires competence in his environment. There are no recorded instances of dramatic or radical changes. The changes which did occur appear to have taken place at times when Kevin's epistemic curiosity had been aroused as in the science lessons based on discovery methods of teaching which utilized Berlyne's (1965) incomplete perception as an incentive to further inquiry and discovery.

Jody

Jody entered the class at twelve-years-and-one-month. He was a dark brown-haired, black eyed youngster of average height, but a little thin for his build and age. He came to the school with no cumulative folder, but with a reputation as a trouble-maker proceeding him. He was put into the teacher's room on a voluntary basis because it was felt he needed a man teacher's influence. He had his first fight within an hour after the beginning of the initial day of school, after which he announced: "I hate everybody here!"

The room's seating facilities were tables to accomodate four, and the other children considered being seated at the table with Jody as punishment. Finally, he begged the teacher to be allowed to sit alone. When asked where he would put an individual desk if it could be gotten, he indicated that it should be adjacent to the teacher's desk. The teacher resisted placing Jody in "isolation," until after a fist fight in which a girl was hurt. The administration arranged for the individual desk.

Jody previously had a reputation of running away from school, but appeared to be attaching himself to the teacher, until one day when he was caught in another section of the building fighting and cursing and was sent to the office. The teacher was summoned, but Jody had fled the premises. The teacher went to his home, but Jody

escaped out the backdoor. The sister-in-law, unkempt and dressed in dirty bluejeans and a soiled blouse, promised that if the teacher would come back "in about two hours" they would have caught him and "the old man and woman" would be home. The teacher returned, and Jody was there. The teacher was given the best chair in the living room, and Jody sat beside him as he attempted to discuss Jody's schoolwork. The father dressed only in trousers talked endlessly about snakes, while across the room a brother recently released from the state penitentiary openly fondled the sister-in-law previously met by the teacher. Another brother, also recently released from confinement was having an asthma attack on the couch beside the parents. Only the mother seemed to want to discuss Jody. She worked as a waitress and was concerned that Jody would grow up "stupid, like his brothers." At that point the husband broke in and loudly insisted that the older boys were his sons, while "God only knows who his old man is!" He pointed to Jody. The mother tried to silence him to no avail, and finally the teacher left.

During the semester, the teacher decided that though it might be necessary for Jody to proceed through his academic work at an individual pace, his extracurricular environment might also be enriched. Jody accompanied the teacher to several University football games, a professional baseball game, and came on tours of available art exhibits. He attended the children's concerts, without the teacher, because he believed the teacher wanted him to listen to that "loud music."

In response to the "Who I am" paragraph, Jody wrote:

> I am Jody. I come from Haltomridge, Texas and I don't like this snooty school where everybody is better than I am. I don't like anything about this town. I hate this school.

Jody was an effective athlete, and by applying his skills to softball and football during the physical education program, Jody began to make friends with some of the other boys. He joined the school safety patrol (which the teacher sponsored) and became a regular member. He formed some friendships with other patrol boys. He took great pride in an important role he played during a November 11sth flag ceremony, when the entire student population was in attendence.

Immediately before the Christmas holidays, Jody began to be absent from school, and inquiries about the causes led to vague excuses from his parents. The teacher called personally at the home which was always vacant until one day the teacher confronted the father at his job as a custodian. The father said: "He ain't comin' back to that ____ school. He's gettin" smartaleck just like them rich kids he's runnin' around with."

The teacher attempted to persuade the parents to return Jody to school, but after the holidays an official transfer slip came through. Twice Jody came to the school to visit the teacher, then no more was heard from him. The teacher recorded his reaction:

> I do not know why Jody was moved. I thought everything was going well. He was beginning to respond and had stopped fighting on his own. He had not been in serious trouble for over a month. The class is quieter now, but I believe the other students miss him.

Comment

It seems clear that Jody had made competent adjustments to the classroom environment, where little pressure to conform was put on him. His conforming acts were always voluntary. He responded to the teacher's efforts to enrich his extracurricular environment, but his achievement of competence in one environment resulted in his loss of effectance in his home environment.

Summary and Conclusions

The purpose of this paper was to analyze R.W. White's theory of competence and effectance motivation, and to draw additional support from drive theorists such as I.P. Pavlov and Daniel E. Berlyne. The two case studies cited were to demonstrate that children in the educational encounter can be taught to gradually achieve competence. The case of Jody seems to indicate that competence in the educational encounter does not always mean additional competence in the social encounter. In fact, it may result in the direct opposite way. The writer believes that psychological concepts and theories such as effectance motivation have practical and applicable use in the classroom, and holds that this paper supports such a contention.

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